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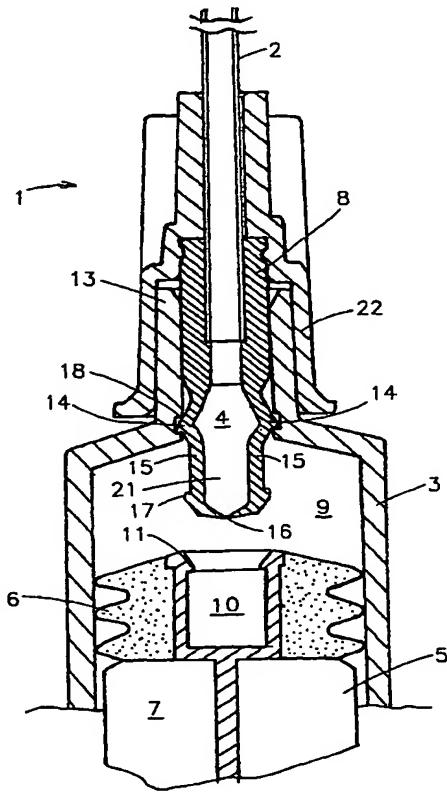
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[Continued on next page]

(54) Title: INJECTION SYRINGE WITH RETRACTABLE NEEDLE



(57) Abstract: The present invention relates to an injection syringe with retractable needle, at least comprising: a liquid container with an outlet opening; a needle with needle mount which is or can be secured in or on the outlet opening of the liquid container; a blocking means which is designed to block the needle mount in the outlet opening, which blocking means can only be unblocked by the needle mount with needle being retracted into the liquid container.

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European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/NL 03/00699

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61M5/32 A61M5/50

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 221 262 A (KITE JOHN P) 22 June 1993 (1993-06-22) column 4, line 15 - line 43 figures 1,2,4	1,3,4,18
A	-----	11
A	WO 02/26295 A (NICODEL S A ;MASTORAKIS EMMANUEL (MC)) 4 April 2002 (2002-04-04) cited in the application page 11, line 3 - line 5 page 13, line 8 - line 13 figures 4A,7	1,2,5
A	GB 2 332 628 A (LIU WEN NENG) 30 June 1999 (1999-06-30) page 9, line 8 - page 10, line 6 page 12, line 23 - page 13, line 2 figures 7,8,10,11,15-17 -----	1,2
	-/-	

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the International filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
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- "P" document published prior to the international filing date but later than the priority date claimed

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- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

8 March 2004

Date of mailing of the international search report

14 MAY 2004

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/NL 03/00699

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 432 082 B1 (CHEN CHO-YING) 13 August 2002 (2002-08-13) figures 4A-4C -----	1,11
A	WO 00/27450 A (MDC INVEST HOLDINGS INC ;BOTICH MICHAEL (US); HALSETH THOR (US)) 18 May 2000 (2000-05-18) page 4, line 1 - line 4 figures 1B,1C -----	12,13,17

INTERNATIONAL SEARCH REPORT

International application No.
PCT/NL 03/00699

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple Inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-17, 18

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-17,18

1.1. claims: 1-17

Injection syringe with retractable needle, having a liquid container, a needle with needle mount and a blocking means which can only be unblocked by the needle mount with needle being retracted into the liquid container (purpose: avoid pain to the patient at the end of an injection stroke)

1.2. claim: 18

Needle mount (purpose: coupling between a needle and an outlet opening of a syringe)

2. claims: 19-21

Securing element provided with a spring member-blocking means (purpose: to prevent unintentional pressure being applied to the needle mount)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/NL 03/00699

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 5221262	A	22-06-1993		AU 628814 B2 WO 8909075 A1 CN 1036510 A GB 2234177 A ,B IE 62062 B1 KR 9402246 B1 NZ 228388 A AU 2449888 A AU 3439989 A		24-09-1992 05-10-1989 25-10-1989 30-01-1991 14-12-1994 19-03-1994 28-07-1992 28-09-1989 16-10-1989

WO 0226295	A	04-04-2002		AT 254940 T AU 2849401 A BR 0116394 A CA 2432547 A1 CN 1455689 T DE 60101307 D1 DK 1244484 T3 WO 0226295 A2 EP 1244484 A2 US 2002173751 A1		15-12-2003 08-04-2002 02-03-2004 04-04-2002 12-11-2003 08-01-2004 22-03-2004 04-04-2002 02-10-2002 21-11-2002

GB 2332628	A	30-06-1999		AU 735953 B2 BR 9800676 A CA 2223188 A1 DE 29800200 U1 FR 2772621 A1 ZA 9800169 A AU 4923897 A		19-07-2001 16-11-1999 29-06-1999 12-03-1998 25-06-1999 09-07-1999 15-07-1999

US 6432082	B1	13-08-2002		NONE		

WO 0027450	A	18-05-2000		AU 1609500 A WO 0027450 A1		29-05-2000 18-05-2000
